

# YAKUTAT SET GILLNET FISHERY

## 2002 MANAGEMENT PLAN



by

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	3
Anticipated Salmon Return .....	3
Fishery Management .....	3
2002 SUMMER MANAGEMENT PLAN .....	4
Alsek River .....	4
East River .....	5
Situk-Ahrnklin and Lost River .....	6
Yakutat Bay .....	7
Yakutat Bay and Manby Shore Ocean Fisheries.....	8
Manby Shore Inland Fishery .....	8
Humpback Creek Fishery .....	8
Akwe River.....	9
Italio River.....	9
Yakataga District .....	10
2002 FALL MANAGEMENT PLAN .....	10
Yakutat District.....	10
Yakataga District .....	11
YAKUTAT AREA — 2002 SALMON RUN PROJECTIONS .....	11
Sockeye Salmon .....	11
Alsek River.....	11
East River .....	11
Akwe River .....	12
Italio River .....	12
Situk River .....	12
Coho Salmon .....	12
Tsiu/Kaliakh River .....	12
Area-wide .....	12
FISHERY CONTACTS .....	13

## INTRODUCTION

The Yakutat area encompasses the waters of Alaska between Cape Suckling and Cape Fairweather. The area is divided into two fishing districts: the Yakataga District between Cape Suckling and Icy Cape, and the Yakutat District between Icy Cape and Cape Fairweather. All five salmon species are harvested in the Yakutat area, with sockeye, coho, chinook, and pink salmon comprising the majority of the catch in that order of importance.

Set gillnet gear is the only net gear permitted in the Yakutat area. About 170 commercial setnet entry permits are renewed annually. Setnet permit holders in the Yakutat area do not have registered sites and may fish in any open fishing area. They may also move between fishing areas during the season as long as not more than one river is fished concurrently.

There are 25 unique setnet fisheries in the Yakutat area. Most of these fisheries target sockeye salmon from mid-June through July and coho salmon in August and September. The only targeted pink salmon fishery occurs in the southeast portion of Yakutat Bay on fish returning to Humpback Creek. Set gillnet fisheries in the Yakataga district primarily harvest coho salmon.

The Alaska Board of Fisheries (board) met to consider proposals for Southeast Alaska-Yakutat groundfish and shellfish species in January 2000 and other finfish (including salmon) species in February 2000. At the January meeting in Juneau, the board approved a modified version of a proposal submitted by the Yakutat Advisory Committee that allows set gillnetters to retain and sell dogfish that are caught incidentally while fishing for salmon. Spiny dogfish retained and sold must be recorded on associated salmon fish tickets.

### *Anticipated Salmon Return*

No formal preseason forecast program exists for the Yakutat salmon runs. Preseason expectations are based on parent year spawning escapements, commercial catch trends, local observations of rearing conditions, and information on year-class strength. The 2002 Yakutat area salmon runs are expected to be below average to average for both sockeye and coho, and average for pink salmon. More detailed projections by drainage begin on page 5.

### *Fishery Management*

Set gillnet fisheries in the Yakutat area are managed by adjusting fishing times and areas in response to inseason assessments of run strength. These actions are taken to provide adequate spawning escapements and to allow harvests of salmon that are surplus to escapement goals. Inseason assessment methods include both fishery performance and spawning escapement information. In the glacial systems, fishery performance data is utilized for management because poor visibility prevents the accurate observation of spawning escapements.

During 2002, the major fishing areas can be expected to open on the following dates:

#### **Yakutat District**

Area	Opening Date
Yakutat Bay (south of 59°40' N. lat.)	10 June
Dangerous River	10 June
Eastern Situk-Ahrnklin Inlet (approximately 2 miles)	17 June
Alsek River	3 June
Manby Shore Ocean	17 June
Lost River	by Emergency Order
Situk-Ahrnklin Inlet	17 June
East River	by Emergency Order
Akwe River	24 June
Remainder of the Yakutat District	24 June
Italio River	by Emergency Order

#### **Yakataga District**

Season	Opening Date
Sockeye Season	by Emergency Order
Coho Season	by Emergency Order

### **2002 SUMMER MANAGEMENT PLAN**

This management plan concentrates on the major fisheries in the Yakutat area. Information on areas that are fished only occasionally is available from the Yakutat area management biologist listed at the end of the plan. Most Yakutat gillnet openings for sockeye salmon run from 6:00 a.m. Monday through 6:00 p.m. Wednesday.

#### ***Alsek River***

The Alsek River, located 45 miles southeast of Yakutat, is a major transboundary river that drains a large area east of the coastal mountain range. The Alsek extends approximately 130 miles from its mouth upriver into the Yukon Territory of Canada. The U.S./Canada border is approximately 40 miles upstream from the

river mouth. The river supports large populations of chinook, sockeye, and coho salmon, and small populations of pink and chum salmon. Alaskan set gillnet fisheries target on sockeye and coho salmon. Canadian subsistence and sport fisheries target on sockeye and chinook salmon.

Commercial salmon landings from the Alaskan portion of the Alsek River averaged approximately 15,000 sockeye, 6,000 coho, and 570 chinook salmon annually from 1997 through 2001. The Canadian subsistence and sport harvest has averaged approximately 500 chinook, 750 sockeye, and 50 coho salmon during the same period. Subsistence and sport fisheries in the Alaskan portion of the river are relatively minor, harvesting about 200 salmon annually.

Historically, the set gillnet fishery targeted on chinook salmon during May in the Alaskan portion of the river. However, due to what was thought to be depressed runs, the directed chinook salmon fishery has been closed since 1962 and chinook salmon are harvested only incidentally during the sockeye salmon fishery in early June. The 2002 run of chinook salmon is expected to produce fish in surplus to the current Klukshu River escapement goal of 1,200 fish.

Both the early and late run segments of the Alsek sockeye salmon run are expected to be below average to average in 2002. The sockeye salmon count at the Klukshu River weir during the parent year (1997) was 6,600 for the early run and 4,900 fish for the late run. The escapement goal for 2002 is a total of 7,500 to 15,000 sockeye salmon past the Klukshu weir. The sockeye salmon escapement to Village Creek was approximately 1,900 fish in 1997, well below average, and sockeye salmon escapements to most U.S. systems were also below average in 1997.

The Alsek opens by regulation on the first Monday in June (June 3). Weekly openings will initially be set at 24 hours. The duration of weekly fishing periods will be based on fishery performance and Klukshu weir data. Gillnets will be restricted to a maximum mesh size of 6 inches through July 1 to minimize chinook salmon harvest. Fishing time will be based on a comparison of current to historical fishery performance data.

The Alsek River surf fishing area is expected to be open during the same periods as the inriver fishery. The surf fishing area includes the shoreline, 0.75 of a mile in each direction, from the river mouth to the outermost bar where the surf breaks.

### ***East River***

The East River is a short, clear river originating from the upwellings and local drainage of the eastern portion of Dry Bay. The area open to inriver commercial fishing extends from the mouth to two miles upstream; the adjacent ocean waters within two miles of the mouth in each direction out to 500 yards from the shore at low tide are also open to commercial fishing. The surf and ocean area is open during the same periods as the inriver fishery.

Prior to 1994 the East River had been one of the most productive sockeye salmon fisheries in the Yakutat area. Salmon catches have dramatically declined since 1993 and have averaged about 37,000 sockeye, 1,500 chum, and 7,400 coho salmon (1994–1998). The river was closed to commercial fishing for sockeye salmon during the 1999, 2000, and 2001 fishing seasons.

The East River sockeye salmon season opens by regulation on the fourth Monday of June (June 24). Due to the dramatic decline in recent sockeye salmon runs the East River will not open until escapement goals are met. If the fishery does open, the duration of weekly fishing periods and open areas will be based on escapements.

The sockeye salmon season is expected to continue until late August. The 1998 parent year escapement was estimated at just over 30,000 fish. An average return from 30,000 spawners could yield a surplus of about 90,000 fish. However, that is an unlikely scenario in 2002, given the recent history of the drainage. Parent year escapements of 28,000 in 1995, 1996, and 1997 produced total in-river returns of 19,500, 21,000, and 17,000 in 1999, 2000, and 2001 respectively. An escapement goal range (peak aerial count) of 26,000 to 57,000 sockeye salmon has been established for the East River.

### ***Situk-Ahrnklin and Lost River***

The Situk-Ahrnklin Inlet is the site of the oldest and, historically, most productive fishery in the Yakutat area. Located about nine miles by road from Yakutat, the Situk-Ahrnklin fishery normally supports the largest concentration of fishing effort in Yakutat (up to 103 permits). Fishing occurs primarily in the inlet, although some fishing occurs at the river mouth and in the adjoining surf-fishing area. Sockeye salmon make up the major portion of the harvest during the summer and coho salmon dominate the catch during the fall. Situk-Ahrnklin catches have averaged about 47,000 sockeye, 125,000 coho, 51,000 pink, and 2,100 chinook salmon (1997–2001).

The 1997 brood year Situk River sockeye salmon escapement was slightly over 42,000 fish. Return per spawner data indicates that the 2001 Situk River sockeye salmon run could exceed 100,000 fish, for a harvest of 50,000 and an escapement of 50,000 fish. Catches will probably be near the recent 5-year average. The sockeye salmon escapement goal range for the Situk River drainage is 30,000 to 70,000 fish through the weir.

An early opening (June 11) for the eastern part of the Situk-Ahrnklin Inlet will depend on the number of chinook salmon counted at the Situk River weir and surveys conducted on the Ahrnklin River. Run timing of Ahrnklin sockeye salmon is generally earlier than Situk sockeye salmon. Evidence of the earlier timing and strength of the Ahrnklin River sockeye salmon was seen when approximately 10,000 sockeye salmon were harvested in openings during the second week of June in 1990 and 1991. Age composition analysis indicates that most of the harvested sockeye salmon were freshwater age 0; distinguishing them from Situk stocks. Parent year (1998) escapement information for the Ahrnklin River is minimal. Fishing periods will be based on fishery performance and escapements through the Situk River weir. A run-timing model will be used to estimate the total Situk River sockeye salmon run beginning after several weeks of harvest and escapement data is available. A similar model will be used to project Situk chinook salmon abundance.

Because chinook salmon are taken incidentally in the set gillnet fishery, the Situk commercial catch of chinook salmon is largely dependent on the fishing time allowed for sockeye salmon. If the chinook salmon return is weak, conservation actions may be necessary to reduce the incidental harvest of chinook salmon. Conservation and allocation objectives associated with the harvest of Situk River chinook salmon are described in the Situk-Ahrnklin Inlet and Lost River Chinook Management Plan [5 AAC. 30.365].

Management options for maximizing harvest of Situk River pink salmon are limited due to the overlap in run timing with sockeye and coho salmon. Escapement goals for pink salmon in the Situk River are 42,000 to 105,000 in even years and 54,000 to 200,000 in odd years. The parent year (2000) escapement past the Situk weir was 330,000 pink salmon.

Steelhead trout in post-spawning condition occasionally accumulate in the Situk River prior to the time they emigrate to the ocean. When the emigration is late, there is a potential for the Situk setnet fishery to harvest a larger than normal number of adults. The rate of emigration of spawned-out steelhead often increases following periods of heavy rainfall. If a major emigration is expected to occur during a scheduled gillnet fishing period, the opening may be delayed for a few days to reduce the incidental harvest of steelhead.

During the winter of 1998/1999 the Lost River changed course and flowed into the Situk/Ahrnklin Estuary instead of the Gulf of Alaska. An attempt was made by some concerned citizens to divert the river back to the Gulf. This action was not successful and the Lost River continues to flow into the Situk/Ahrnklin Estuary. Prior to the 1999 fishing season the department developed a management plan for the Lost River and Situk/Ahrnklin Estuary with the intent of meeting escapement requirements for the Lost River. This plan closed the Lost River and the North bank of the Situk/Ahrnklin Estuary between an ADF&G regulatory marker approximately 100 yards above the confluence of the Lost River and the Situk/Ahrnklin Estuary and a marker located near the mouth of the Situk/Ahrnklin Estuary. The plan went into effect at the beginning of the season and the Lost River (Tawah Creek) was surveyed weekly throughout the season to monitor escapement. The lower marker was moved closer to the Lost River as escapement objectives in the Lost River were met. The end result was that sockeye and coho escapement goals for both the Lost River and the Situk/Ahrnklin system were met.

Based on observations made in 1999 the plan has been modified for the 2002 fishing season. The weekly escapement surveys on the Lost River indicated sockeye salmon run timing is different for Lost River and Situk/Ahrnklin stocks. Therefore, the north bank of the Situk/Ahrnklin Estuary from a marker at the mouth of the estuary to a marker 100 yards above the confluence of the Lost River will be closed to commercial set gillnet fishing beginning July 9. Prior to this date the closed area will be confined to 100 yards on each side of the mouth of the Lost River. It is anticipated that the Lost River will remain closed for the entire sockeye salmon season. The intent of these closures is to achieve the escapement goal (peak float count) of between 1,000 and 2,300 sockeye salmon that has been established for the Lost River and to maximize fishing opportunity in the Situk/Ahrnklin estuary. Regulatory marker placement may change during the course of the season as escapement or river channel movement warrants.

### ***Yakutat Bay***

Three separate set gillnet fisheries occur in Yakutat Bay. The Yakutat Bay fishery occurs in the ocean waters of Yakutat Bay south of 59°40' N. latitude and opens by regulation on the second Monday of June (June 10). The Manby Shore Ocean fishery encompasses the ocean waters of Yakutat Bay north of 59°40' N. latitude

and opens the third Monday of June (June 17) by regulation. The Manby Shore inland fishery opens by regulation on the fourth Monday of June (June 24) and includes the streams along the northern shore of Yakutat Bay.

### **Yakutat Bay and Manby Shore Ocean Fisheries**

Both the Yakutat Bay and Manby Shore Ocean fisheries harvest mixed stocks of sockeye salmon. Tag recovery data collected in 1987 indicated that a major portion of the Yakutat Bay sockeye salmon harvest was of Situk origin. Because of the high Situk River sockeye salmon contribution to the Yakutat Bay and Manby Shore ocean fisheries, both fisheries will be managed to conserve or harvest Situk River sockeye salmon from the third week in June through the third week of July. The Yakutat Bay fishery will open by regulation on Monday, June 10 for 2.5 days. The weekly fishing period will be limited to a maximum of 4.5 days due to the mixed stock nature of the ocean fisheries and the potentially adverse impact on weaker Yakutat area stocks.

The Manby Shore Ocean fishery will open by regulation on Monday, June 17. Weekly fishing periods will depend on Situk River sockeye salmon run strength.

### **Manby Shore Inland Fishery**

Management of the Manby Shore inland fisheries (waters upstream of the mean high-tide line) will be based on the abundance of local stocks. During the summer, these fisheries harvest salmon primarily from Manby and Sudden Streams. A 2.5-day weekly fishing period can be expected during the initial opening period scheduled for June 24. Additional open periods will depend on fishery performance.

### **Humpback Creek Fishery**

The Humpy Creek fishery located in the southeastern portion of Yakutat Bay targets pink salmon. A below average run is expected at Humpy Creek for the 2002 season. Humpy Creek was not surveyed during the 2000 parent year. Inseason management of this fishery will be based on observed pink salmon escapement to Humpy Creek and the availability of pink salmon in the Yakutat Bay fishery. Escapement goals (peak aerial count) of 3,300 to 8,000 pink salmon in even years and 7,000 to 18,000 pink salmon in odd years have been established for Humpy Creek. There has not been a directed fishery on Humpy Creek for many years.



### ***Akwe River***

The Akwe River is a glacial river system located about 35 miles south of Yakutat. The lower seven miles of the river are wide and shallow and flow parallel to the beach before entering the ocean. The commercial fishery occurs in this lower portion of the river. The 1997–2001 average Akwe River harvest was approximately 9,500 sockeye, 6,900 coho, and 110 chinook salmon. This average reflects the 2000 harvest of 21,000 sockeye, the second highest on record, and the 2001 harvest of 17,000, the sixth highest on record. The previous 10-year average for sockeye was approximately 3,000 fish.

The sockeye salmon return to the Akwe River is expected to be average in 2001 based on parent year fishery performance and effort. Parent year escapement counts were minimal. Depending on market conditions, effort levels may be high on the Akwe in 2002 due to expectations created by the high catches of 2000 and 2001. Reductions in the normal 2.5-day weekly fishing period may be necessary to insure adequate escapement. The sockeye salmon fishery is scheduled to open by regulation on June 24 and the season should extend through early August. Inseason management will be based on fishery performance and index escapement counts. An escapement goal (peak aerial count) of 600 to 1,500 sockeye salmon has been established for the Akwe River.

The Akwe River will be open upstream of the markers located about 0.5 miles from the terminus of the Akwe River lagoon at mean low tide to the upper markers located 2.5 miles downstream from the westernmost end of the Sand Dunes, a fishing area of about four miles.

### ***Italio River***

The Italio River is located adjacent to the Akwe River. The Italio supports small runs of sockeye and coho salmon. The course of the Italio River changed and flowed into the lower Akwe River during the winter of 1986/1987 and both rivers now share a common mouth. Both Italio and Akwe salmon stocks are present in this area and for some distance upstream in each river. Determination of Akwe or Italio run strengths based on fishing success in the junction area is not possible. Therefore, the junction and a portion of each river above the junction is closed to set gillnet fishing.

The Italio River sockeye salmon fishery has not been open since 1987. When the Italio River changed channel and entered the Akwe River lagoon, the homing ability of Italio River sockeye salmon may have been negatively affected. As a result, it may take several years for the productivity of the Italio River sockeye stock to return to historic levels. The Italio River fishery opens by emergency order when good escapements are observed. The parent year escapements for this year's sockeye salmon return were below the lower range of the escapement goal. An escapement goal (peak aerial count) of 2,500 to 7,000 sockeye salmon has been established for the Italio River.

### ***Yakataga District***

The Yakataga District is not expected to be open during the sockeye salmon season in 2002. It will open by emergency order sometime in August based on coho salmon escapement.

### **2002 FALL MANAGEMENT PLAN**

Fall fishing is directed primarily at harvesting coho salmon, although fall chum salmon can contribute to the catches on the East River. The fall fishing season generally begins on the first Monday of August. At that time, the regulatory weekly fishing period changes in most areas to a 12:01 p.m. opening, and 12:00 noon, closing time.

During the fall, set gillnet fishing occurs in both the Yakutat and Yakataga Districts. In the Yakutat District, the fall coho salmon fishery occurs primarily in the same areas as the summer sockeye salmon fishery. In the Yakataga District, there are areas where only coho salmon fishing takes place.

Overall catches and escapements of coho salmon in the Yakutat area were slightly below average in the parent year (1998). As a result, the 2002 coho salmon run is expected to be below average to average area-wide.

### ***Yakutat District***

Fall fishing will begin on August 5 in the Yakutat District, except in the East River where management will continue to be based on sockeye salmon run strength through most of August. The initial fishing periods can be expected to extend from 12:01 p.m. Monday through 12:00 noon Thursday, the normal fall weekly gillnet period specified by regulation.

Inseason management of all Yakutat District fall fisheries will be based on fishery performance data and inseason coho salmon escapement surveys. The following escapement goals (peak aerial or float counts) have been established for coho salmon in the Yakutat District: East River 2,500 to 8,500; Akwe River 1,800 to 5,000; Italio River 1,400 to 3,600; Situk River 3,300 to 9,800; and Lost River 2,200 to 6,500.

Fishing time and area adjustments will be made for each river as needed for conservation. A closed area can be expected in the Yahtse River to protect schools of milling coho salmon at tributary mouths. The actual closed water area will be based on inseason observations of coho salmon schooling behavior, which is related to river flow conditions. Several small coho salmon streams are located along the forelands west of the Yahtse River to Cape Yakataga. Most of these streams have very small numbers of spawning coho salmon and cannot support inriver set gillnet fisheries. This entire area will remain closed until harvestable surpluses are evident.

### ***Yakataga District***

The major coho salmon fisheries in the Yakataga District occur on the Kaliakh and Tsiu Rivers, located about 125 miles northwest of Yakutat. The Tsiu River is the more productive of the two rivers; in recent years, catches have averaged about 56,000 coho salmon. The Kaliakh has not been fished since 1999. Parent year (1998) escapement counts were just above the low end of the goal range for the Tsiu River. The parent year escapement for the Kaliakh was well below average. The 2002 coho salmon return is expected to be average in the Tsiu and below average in the Kaliakh. Escapement goals (peak aerial counts) of 10,000 to 29,000 and 4,000 to 14,000 coho salmon have been established for the Tsiu and Kaliakh rivers, respectively.

The Tsiu River opening date and fishing periods will be determined from observed escapements above and below the regulatory markers. The Kaliakh River weekly fall fishing periods will normally open from 9:00 a.m., Monday through 9:00 a.m., Thursday, beginning on August 12. Market conditions will dictate whether or not the Yakataga District is fished in 2002. The area is remote and fish must be flown to markets. It is possible that it will be economically unfeasible to fish the district.

## **YAKUTAT AREA — 2002 SALMON RUN PROJECTIONS**

### ***Sockeye Salmon***

#### **Alsek River**

The parent year escapement was approximately 11,000 through the Klukshu Weir. A total harvest of around 12,000 sockeye salmon is expected.

#### **East River**

The parent year escapement was estimated at 30,000 fish. An average return per spawner would yield a catch of around 75,000 fish, with an escapement of 26,000 to 50,000. However, based on recent returns to the East River an average return per spawner is not expected and this fishery will not open until escapement goals are met.

### **Akwe River**

No parent year escapement counts are available. An average catch is expected for 2002 based on parent year fishery performance and effort.

### **Italio River**

Parent year escapement was within the recommended escapement goal range. Although recent returns have been improving, it is unlikely there will be a directed sockeye salmon fishery in the Italio River in 2002.

### **Situk River**

The parent year escapement was 42,000 fish. A harvest of around 50,000 sockeye salmon, with an escapement of about 50,000 sockeye salmon is expected.

## ***Coho Salmon***

### **Tsiu/Kaliakh River**

Depending on effort levels, a catch of over 40,000 coho salmon may be possible in the Tsiu River in 2002. In the Kaliakh River, a harvest of 1,000 to 3,000 coho salmon is possible.

### **Area-wide**

Parent year escapements were below average in most areas. The run is expected to be slightly below average. The area wide set gillnet harvest is expected to be about 175,000 coho salmon.

## **FISHERY CONTACTS**

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